

**THE HASTINGS RIVER MOUSE, *PSEUDOMYS ORALIS*, FROM GAMBUBAL STATE FOREST, SOUTHEAST QUEENSLAND.** *Memoirs of the Queensland Museum* 37(1):280. 1994. - *Pseudomys oralis* is a poorly known, perhaps rare, Australian species of murid rodent. The few recorded localities at which live specimens have been captured are all in eastern New South Wales and southeastern Queensland (Ingram & Raven, 1991). Skeletal remains found in "geologically recent cave deposits" in the Great Dividing Range in Victoria and New South Wales, and in "relatively fresh owl pellets" near Maleny, Queensland (Kirkpatrick, 1983: 394), suggest that the Hastings River Mouse once had a much wider distribution (Watts & Aslin, 1981). Three *P. oralis* captured at Gambubal State Forest (SF) (Queensland SF Forest 661: 28°30'S, 152°27'E) between April and July 1993 are the first records of this species from Queensland in more than 20 years.

Gambubal SF is situated on the western slopes of the Great Dividing Range near Warwick, between altitudes of 1080m and 1196m. Vegetation types in the area include complex autochthonous vine forest, tall open eucalypt forest, open tussock grassland with interspersed herbs and ecotonal communities. The vine forest was logged in the 1950's and early 1960's (Dale, 1983) and the tussock grassland and eucalypt forest have been disturbed by varying intensities of fire and cattle grazing. Mean annual rainfall is 1199mm over the last 36 years, and mean monthly temperatures range from 25.2°C in January to 4.9°C in July. Rainfall is expected to be higher and the range of temperatures greater, at the higher elevations where *P. oralis* was captured.

The captures of small mammals reported here were made in the course of routine transect trapping, initiated in April 1993, to investigate the vine forest grassland and the vine forest eucalypt forest ecotones. At each ecotone two parallel trap lines, 200m long and 100m apart, were established across the habitat interfaces. Each line included 20 trapping stations. Two type A Elliott traps (30 x 10 x 9cm) baited with sweet potato soaked in vegetable oil and bacon were used at each station.

*P. oralis* were captured only on the vine forest eucalypt forest transect lines. On April 24, 1993 one adult female (76g) with enlarged, recently post-lactation teats was captured in open eucalypt forest 75m from the vine forest edge. The animal was ear tagged and released. On April 25, 1993 it was recaptured on the same transect line 65m from the vine forest edge. On the same day a second adult female (86g) was captured on the other transect line, 95m from the vine forest edge. An immature male *P. oralis* (70g) was captured on June 22, 1993; it was taken on the first transect line, 5m within the vine forest. This individual was recaptured at the same station on July 23, 1993 (77g). At this time it had fully descended testes.

The five captures of three *P. oralis* have been obtained in the course of 720 trap nights; 360 within open eucalypt forest and 360 within vine forest. Additional captures have been 9 *Rattus fuscipes*, 18 *Rattus latreolus*, 1 *Melomys cervinipes*, 32 *Antechinus stuartii* and 3 *Sminthopsis murina* in the open eucalypt forest and 39 *Rattus fuscipes*, 11 *Melomys cervinipes* and 53 *Antechinus stuartii* in contiguous vine forest on the same transect lines.

At Gambubal SF the open eucalypt forest is dominated by New England Blackbutt (*Eucalyptus campanulata*) with a dense ground cover of blady grass (*Imperata cylindrica*), some kangaroo grass (*Themeda triandra*) and snow grass (*Poa labillardieri*), bracken (*Pteridium esculentum*) and herbs. Burnt logs are abundant but little leaf litter is evident. The area in which the traps were located was unburnt for about 20 years before a mild fire in November 1990. Between 100 and 150m from the edge of the vine forest, the land slopes steeply down to the Condamine gorge. *Acacia* saplings growing along the slope indicate that fire intensity may have been greater here

than at the higher altitude where *P. oralis* were captured. The area is relatively inaccessible to stock; it was free of cattle grazing until 1991 and grazing disturbance appears to be minimal. The transition from open eucalypt forest to vine forest is abrupt and the site where the male *P. oralis* was captured is unlike locations within the eucalypt forest; grass was absent from the understorey and there was a thick layer of leaf litter beneath a moderately dense canopy of typical vine forest shrubs and vines, dominated by *Eucalyptus dumali*.

Kirkpatrick (1983: 394) reported that captures of *P. oralis* were made "alongside fallen logs lying near low creek banks in tall, open eucalypt forest with substantial growth of bracken". He recorded adult weights of 90-100g. Earlier captures from Queensland by Kirkpatrick & Martin (1971: 114) were made in a bracken fern - covered creek bank in open eucalypt forest, about 20 miles from Warwick in the foothills of the Great Dividing Range (Covacevich & Easton, 1974: 32; Hyett & Shaw, 1980). These captures were obtained at 600m altitude, approximately 10 km SW from Gambubal State Forest. The captures reported from Gambubal State Forest are from a substantially higher altitude (i.e. 1100m) and are distant from watercourses, indicating that the sites at which *P. oralis* has been previously caught may not be wholly representative of their habitat. The recent breeding status of the two females taken in April suggests that the animals were not transient within the area that was trapped. In August 1993, subsequent captures of *P. oralis* were obtained at this site by the Department of Environment and Heritage, and a male specimen (84g) collected on August 14, 1993, is lodged at the Queensland Museum (QMJM9994).

Observations reported in this paper confirm the continued survival of *P. oralis* in southeastern Queensland and extend the range of environments in which the species may be found.

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